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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,480	03/30/2001	David W. Cannell,	05725.0777-00	5496
22852	7590	05/10/2005	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			CHANNAVAJJALA, LAKSHMI SARADA	
			ART UNIT	PAPER NUMBER
			1615	

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/821,480	Applicant(s) CANNELL ET AL.	
	Examiner Lakshmi S. Channavajjala	Art Unit 1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-120, 152-155 and 161-163 is/are pending in the application.
- 4a) Of the above claim(s) 41-120, 152-155 and 163 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40, 161 and 162 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Receipt of response dated 1-14-05 is acknowledged.

The following rejection of record has been maintained:

#### ***Claim Rejections - 35 USC § 112***

Claim 9 recites the limitation "anionic" in line 1. There is insufficient antecedent basis for this limitation in the claim.

#### ***Claim Rejections - 35 USC § 102***

1. Claims 1, 2, 10, 25, 27-30 and 37-40 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,660,838 to Koga et al.

Koga discloses external use preparations comprising xylobiose, in amount of 0.0001 to 20%, preferably 0.1 to 10%. The composition of Example 4 (col. 9) contains xylobiose and a film-forming agent, polyvinyl alcohol. Koga discloses the composition in the form of a cream, lotion, ointment etc (col. 10, claim 3) and also discloses addition of cosmetic additives such as polyethylene glycol monostearate (example 7 and col. 2-3), which reads on the claimed additive (claim 150). While example 4 is directed to a pack, instant claims are directed to a composition and the limitation "for durable non-permanent shaping", which is an intended use that carries no patentable weight. Koga discloses the claimed amounts of xylobiose in the hair compositions and accordingly the ability to impart the claimed effect is inherent to Koga. Therefore, Koga anticipates the instant claims.

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2. Claims 1-4, 10-40, 161 and 162 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pub. No. US 2002/0031483 A1 to Beck et al (hereafter collectively Beck).

**Beck** teaches a hair treatment composition comprising a compound chosen from a TCA cycle intermediate, a carbohydrate, a sugar, a fatty acid product or a glycolysis product. Appropriate sugars include trioses such as glyceraldehydes (aldose), and dihydroxyacetone (ketose), tetroses such as erythrose, threose, and erythrulose, pentoses such as ribose, arabinose, xylose, lyxose, ribulose and ribulose phosphate and xylulose, which read on instant claims 121-135. Further, Beck teaches Furanoses, pyranoses, phosphate derivatives of sugars (page 1, paragraph 0015). In col. 2, paragraph 0041, Beck teaches the film-forming cationic polymers such as Polyquaternium 16, which is also claimed. Beck also teaches that the composition preferably contains 0.01% to 0.5% of the useful compounds (page 1, paragraph 0018), which falls within the claimed range of 0.01% to 10%. Beck teaches the compositions in the form of a shampoo or used in a conditioner composition, which read on the instant dispersion or emulsion (page 1, paragraph 0020). Further, Beck suggests addition of suitable surfactants, polymers, conditioning agents, adjunct materials and water to the compositions (pages 2 and 3, and examples 4-9 on page 5).

Beck teaches that the composition is used for hair treatment, in particular for oxygen consumption of hair follicle and thus stimulating the hair growth. Beck does not teach instant durable non-permanent shaping of hair. However, as explained the recitation of intended use does not carry patentable weight in composition claims.

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Further, amount of compounds taught by Beck is within the claimed range of monosaccharides. Accordingly, it would have been obvious of one of an ordinary skill in the art at the time of the instant invention to use the monosaccharides i.e., trioses, tetroses etc., containing various cosmetic additives such as cationic polymers (Polyquaternium series of compounds) in the hair treatment composition in the range of 0.01 to 0.5% with an expectation to stimulate the growth of hair follicle because Beck suggests that the sugars provide the required oxygen supply for the growth of hair follicle.

While Beck does not recognize the claimed effect, Beck teaches sugars in the same amounts as claimed. Accordingly, absent showing evidence to the contrary, the hair compositions containing 0.01% to 0.5% of sugars such as trioses or tetroses possess the ability to impart the claimed durable non-permanent shaping of hair fibers. With respect to the limitation heat-activated, instant claims does not state the temperature or the process of heating. However, the composition of Beck, upon application to skin, undergoes a temperature shift due to the normal body temperature and thus meets the claimed requirement.

3. Claims 1, 2, 5, 6, 10-16, 24-40, 161 and 162 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,900,545 to **Wisotzki**.

**Wisotzki** teaches hair compositions containing panthenol, at least mono or disaccharides of pentoses or hexoses, one triol and at least one polyvinylpyrrolidone (lines bridging col. 1-2). Among the pentoses and hexoses, Wisotzki teaches aldoses

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and ketoses or their mixtures containing C5 to C6 atoms, the suitable monosaccharides including xylose, glucose, ribose, arabinose, sorbose etc (col. 2, lines 36-49 and claims for the amounts of sugars). Wisotzki also states that technically all naturally occurring mixtures of mono or disaccharides are suitable for the hair regenerating hair-split ends and revitalizing hair. The polyvinylpyrrolidone film-forming polymer of Wisotzki meets instant claimed nonionic polymer. Accordingly, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention to use the composition of Wisotzki containing sugars, in particular aldoses and ketoses, and film-forming polymer PVP for treating hair to revitalize hair by regenerating split ends because Wisotzki suggests that the combination of sugars, panthenol and PVP have a considerably high healing rate in regenerating the split ends of hairs caused to permanent waving or dyeing of hairs. Further, while Wisotzki teaches pentoses and hexoses as opposed to the claimed C3 to C5 monosaccharides, Wisotzki teaches both hexoses and pentoses are equally effective in regenerating and revitalizing hair and teaches sugars in the same amounts as claimed. Accordingly, absent showing evidence to the contrary, the hair compositions containing sugars of Wisotzki possess the ability to impart the claimed durable non-permanent shaping of hair fibers. With respect to the limitation heat-activated, instant claims does not state the temperature or the process of heating. However, the composition of Wisotzki, upon application to skin, undergoes a temperature shift due to the normal body temperature and thus meets the claimed requirement.

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4. Claims 1, 2, 5-16, 24-40, 161 and 162 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,690,924 to Keil et al (Keil) in view of over US 4,900,545 to **Wisotzki**.

Keil teaches hair treatment compositions comprising chitosan, 2-pyrrolidone carboxylic acid and anionic or nonionic film forming polymers or other natural film forming polymers for increased combability, care and fixing of hair. Among the film-forming polymers, Keil suggests the polymers of the instant claims (col. 2, lines 35-61) such as LUVISKOL. The examples of Keil are directed to hair compositions (hair fixing as well as a shampoo with hair fixing action-example 10) and contain various film-forming polymers (see col. 5-8). Keil teaches cosmetic additives of the instant claims but does not teach the instant monosaccharides.

**Wisotzki** teaches hair compositions containing panthenol, at least mono or disaccharides of pentoses or hexoses, one triol and at least one polyvinylpyrrolidone (lines bridging col. 1-2). Among the pentoses and hexoses, Wisotzki teaches aldoses and ketoses or their mixtures containing C5 to C6 atoms, the suitable monosaccharides including xylose, glucose, ribose, arabinose, sorbose etc (col. 2, lines 36-49 and claims for the amounts of sugars). Wisotzki also states that technically all naturally occurring mixtures of mono or disaccharides are suitable for the hair regenerating hair-split ends and revitalizing hair. The polyvinylpyrrolidone film-forming polymer of Wisotzki meets instant claimed nonionic polymer.

Accordingly, it would have been obvious of one of an ordinary skill in the art at the time of the instant invention to use the monosaccharides of Wisotzki in the hair

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treatment composition of Keil containing the film-forming polymers for fixing the hair, with an expectation to regenerate and revitalize hair because Wisotzki suggests that the combination of sugars, panthenol and PVP have a considerably high healing rate in regenerating the split ends of hairs caused to permanent waving or dyeing of hairs.

Further, while Wisotzki teaches pentoses and hexoses as opposed to the claimed C3 to C5 monosaccharides, Wisotzki teaches both hexoses and pentoses are equally effective in regenerating and revitalizing hair and teaches sugars in the same amounts as claimed. Accordingly, absent showing evidence to the contrary, the hair compositions containing sugars of Wisotzki possess the ability to impart the claimed durable non-permanent shaping of hair fibers. With respect to the limitation heat-activated, instant claims does not state the temperature or the process of heating. However, the composition of Wisotzki, upon application to skin, undergoes a temperature shift due to the normal body temperature and thus meets the claimed requirement.

### ***Response to Arguments***

Applicant's arguments filed 1-4-05 have been fully considered but they are not persuasive.

Applicants have not responded not amended claim 9 with respect to lack of antecedent basis.

KOGA- 102(b): Applicants argue Koga does not anticipate instant claims and that xylobiose is a disaccharide and not a C3-C5 monosaccharide as claimed. However,



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instant claims, in particular claim 28, recite xylobiose as a monosaccharide, which is contrary to the argument made by applicants. Applicants argue that there is no motivation or suggestion in Koga to select the claimed C3-C5 monosaccharides. However, instant claims are rejected as anticipated by Koga and not as being obvious over Koga. Accordingly, applicants' argument regarding the motivation or suggestion of Koga is moot.

BECK- 103:

Applicants argue that there is no suggestion or motivation in Beck to select one compound chosen from C3-C5 saccharides from Beck's laundry list of possible sugars such as trioses, tetroses, pentoses, glucose, disaccharide, complex sugars such as glyceraldehydes etc. Applicants argue that Beck's lack of specificity does not render the present claimed invention obvious. Examiner notes that during the interview on 7-13-04, it was mentioned to examiner that applicants will consider submitting a declaration showing comparative testing of prior art compositions. However, applicants have not provided any unexpected results with C3-C5 sugars as opposed to C6 sugars. In response to the examiner's position, applicants state that until the examiner has met the burden of establishing a prima facie of obviousness, there is no need for the applicants to provide any proof of unobviousness. The motivation or suggestion to choose a specific sugar comes from the teaching of Beck that the sugars are useful as a hair composition. While Beck does not teach for the claimed effect, instant claims are only directed to a composition and not a method and accordingly the motivation to choose a sugar in the hair composition need not be the same as motivation of the

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instant invention. Further, Beck teaches that all the sugars are equally effective in the hair composition. Therefore, one of an ordinary skill in the art would have achieved the same result as that of the instant, absent evidence to the contrary.

Wisotzki:

Applicants argue that similar to Beck, there is no suggestion in Wisotzki to select the claimed monosaccharides over any other sugar disclosed such as disaccharides and that to arrive at the claimed invention from Wisotzki, one of ordinary skill in the art must pick from a myriad of possibilities without specific guidance to arrive at the claimed invention. Applicants' argument is not found persuasive because Wisotzki teaches hair compositions with a hexose or pentose sugar and not a laundry list of sugars as argued by applicants. Accordingly, one of an ordinary skill in the art does not have to pick and choose from the sugars of Wisotzki in order to arrive at the instant invention.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any


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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lakshmi S. Channavajjala whose telephone number is 571-272-0591. The examiner can normally be reached on 9.00 AM -6.30 PM

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Lakshmi S Channavajjala  
Examiner  
Art Unit 1615  
May 4, 2005

  
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